

REMARKS

Claims 1 and 4 through 11 are pending in this Application. Applicant acknowledges, with appreciation, the Examiner's allowance of claims 5 through 8. Accordingly, the only remaining issue pivots about the patentability of claims 1, 4 and 9 through 11.

Claims 1, 4 and 9 have been amended and claim 3 cancelled. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, original claim 3 and page 1 of the written description of the specification, lines 28 and 29, noting that the amendment to claim 4 merely changes the dependency appropriately and the amendment to claim 9 addresses a regrettable typographical oversight. Applicant submits that the present Amendment does not generate any new matter issue.

Claim Objection

The Examiner objected to claim 9 noting that two periods at the end thereof. In response, claim 9 has been amended to address the inadvertent typographical oversight, thereby overcoming the stated basis for the objection. Accordingly, withdrawal of the objection to claim 9 is solicited.

Claims 1 and 3 were rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Lee et al.

In the statement of the rejection the Examiner referred to Figs. 5A-5F of Lee et al., column 3, lines 40 through 46, and column 4, lines 42 through 44, asserting the disclosure of a semiconductor device comprising, *inter alia*, a copper fuse and aluminum connection portion. This rejection is traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). There are significant differences between the claimed semiconductor device and the semiconductor device disclosed by Lee et al. that scotch the factual determination that Lee et al. disclose a semiconductor device identically corresponding to that claimed.

Specifically, in accordance with claim 1, particularly as now presented, a **connection** portion of an interconnection line is electrically connected to the fuse, wherein the fuse and connection portion are formed of different metals, such that the oxidation speed of the metal forming fuse is faster than the oxidation speed of the metal forming the connection portion of the interconnection line. The fuse is formed of copper, while the **connection** portion of the interconnection line is formed of an aluminum metal. Applicant submits that such a structure is neither disclosed nor suggested by Lee et al. Indeed, in the structure disclosed by Lee et al., element 30 is, as admitted by the Examiner at page 2 of the September 28, 2004 Office Action, line 7, “an interconnection line”. But according to the claimed invention it is a **connection portion of the interconnection line** that is electrically connected to the fuse. Via 20 in the structure of Lee et al. is not electrically connected to any fuse.

The above argued structural difference between the claimed device and the device disclosed by Lee et al. is functionally significant. In this respect, Applicants would note that the structure of the present invention prevents oxidation of the copper from advancing over an Al/Cu interface, and further facilitates fuse breaking.

The above argued functionally significant difference between the claimed semiconductor device and the semiconductor device disclosed by Lee et al. undermines the factual determination that Lee et al. disclose a semiconductor device identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicant, therefore, submit that the imposed rejection of claims 1 and 3 under 35 U.S.C. § 102 for lack of novelty as evidenced by Lee is not factually viable and, hence, solicits withdrawal thereof.

Claim 4 was rejected under 35 U.S.C. § 102 for lack of novelty or, alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Lee et al.

Claims 9 through 11 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Lee et al. in view of Delpech et al.

Each of the above rejections of claim 4 and of claims 9 through 11 is traversed. Specifically, claims 4 and 9 through 11 depend from independent claim 1. Applicant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 102 for lack of novelty as evidenced by Lee et al. Neither the additional comments offered by the Examiner with respect to the rejection of claim 4 nor the secondary reference to Delpech et al. cure the previously argued deficiencies of Lee et al. Accordingly, even if the device disclosed by Lee et al. is modified as suggested by the Examiner, and Applicants do not agree that the requisite fact-based motivation has been established, the claimed invention would not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).


Applicant, therefore, submits that the imposed rejection of claim 4 under 35 U.S.C. § 102 for lack of novelty or, alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Lee et al., and the imposed rejection of claims 9 through 11 under 35 U.S.C. § 103 for obviousness predicated upon Lee et al. in view of Delpech et al., are not factually or legally viable and, hence, solicit withdrawal thereof.

Applicant again acknowledges, with appreciation, the Examiner's allowance of claims 5 through 8. Based upon the arguments submitted *supra*, it should be apparent that the imposed objection and rejections have been overcome, and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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